

Climatological Data for September, 1909. DISTRICT No. 9, COLORADO VALLEY.

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GENERAL SUMMARY.

The seasonal summer rains, which, this year, were remarkably heavy and widespread, ended abruptly at the beginning of the second decade. During their continuance, the weather in September resembled that of the preceding months; there was a great excess of cloudiness, humidity, and rainfall, with low day temperatures and deficient wind movement. After their close, fair weather prevailed, except for local showers on the 24th and 25th, and the amount of sunshine and the diurnal range in temperature were greater. A cool wave, that brought frost to the higher parts of the district, occurred from the 13th to 15th. A second cool spell prevailed from the 22d to 24th, but over the greater part of the district no killing frost occurred during the month.

The mean temperature of the 136 stations reporting was 66.2°, or 0.9° below the normal. In western Wyoming the mean was 52.3°, or 2.1° above the normal; in the southern portions of the district there was a general deficiency. By subdivisions the means and departures were: western Colorado, 55.1°, -0.7°; eastern Utah, 62.9°, -0.1°; western New Mexico, 64.3°, -1.9°; Arizona, 73.5°, -1.1°. The highest monthly mean was 86.6°, at Mohawk Summit, Ariz.; the lowest, 38.2°, at Corona, Colo. The extremes were: 110° at Parker, Ariz., and 7°, at Breckenridge, Colo.

The average precipitation for the 170 stations reporting was 1.47 inches, or 0.33 inch above their normal. By watersheds the means and departures were: Green, 1.80 inches, +0.40 inch; Grand, 1.86 inch, +0.49 inch; San Juan, 2.13 inches, +1.18 inches; Little Colorado, 1.48 inches, +0.30 inch; Gila and its tributaries, 1.09 inches, +0.08 inch; lower Colorado and its tributaries, 1.37 inches, +1.01 inches. The heaviest monthly amount was 4.56 inches at Fort Wingate, N. Mex.; the least, 0.10 inch at Sentinel, Ariz. Many stations in the San Juan Basin and vicinity reported over 1 inch in twenty-four hours, usually on the 4th and 5th.

This heavy rain falling on a remarkably steep and rocky watershed, caused violent floods in the San Juan and San Miguel rivers and their tributaries. Bridges were carried away, railroad tracks buried under earthslides, growing crops were destroyed and, in places, fields were swept bare and orchards were carried away by the erosive action of the flood. In the San Juan, the water reached the highest stage since settlement of the region, and it is said that the Indians have no tradition of so great a flood. In Arizona the rainfall was not generally beyond the carrying capacity of the streams, and the previously good water supply was augmented. Without further replenishment, the water supply was considered sufficient to last until January 10.

The sunshine was generally below, and the humidity above the normal, on account of the cloudy and wet weather of the first two weeks. Both elements were near the average in the latter part of the month. The wind movement was light, especially in Arizona; this condition has obtained throughout the summer, and is generally found in very wet seasons.

NOTES.

OPENING OF GUNNISON TUNNEL.

The formal opening of Gunnison Tunnel was celebrated at the west portal of the tunnel September 23, with the President of the United States, the Secretary of the Interior, and officials of the Reclamation Service in attendance, and in the presence of many excursionists from all parts of Colorado. A program planned by a committee of local citizens, known as the Gunnison Tunnel Opening Committee, was satisfactorily carried out.

Gunnison Tunnel has a length of a little less than 6 miles and a cross-section nearly rectangular, about 10½ by 12 feet. When completed it will have a capacity of 1,300 second-feet of water, and its purpose is to convey

water from Gunnison River to the valley of the Uncompahgre River for use in irrigation.

The construction of the tunnel was begun in January, 1905, and the actual opening through the tunnel was completed July 6, 1909. For a portion of its length additional excavation will still be required to complete the full section, and a considerable amount of concrete lining is yet to be placed.—*Reclamation Record*, October, 1909.

The Roosevelt Dam, located 75 miles east of Phoenix, Ariz., on the Salt River, at the junction of Tonto Creek will be completed about July 1, 1910. L. C. Hill, Supervising Engineer of the Salt River Project, Phoenix, Ariz., states that the waters of Lake Roosevelt are already 2 miles wide and 10 miles long; and that, when the dam is finished, the water impounded in the lake will be 5 miles wide and 25 miles long, a volume sufficient to irrigate 350,000 acres of land in the lower Salt River Valley, for two years, without replenishment from additional precipitation, run-off, or other source of water supply.

The Reclamation Service has abandoned the San Carlos Project, on the Gila River, in southern Gila County, and recommended the boring of artesian wells for irrigation purposes.

The Laguna Dam, on the Colorado River, located 12 miles north of Yuma, Ariz., has recently been completed. This project is capable of serving water sufficient for the irrigation of some 200,000 acres of land lying along the Colorado River, on the borders of Arizona and California, which will open be for entry during October, 1909.

The Director of the Coconino Forest Experiment Station, Mr. G. A. Pearson, whose headquarters are at Flagstaff, Ariz., has been experimenting with wild grasses with a view to planting hardy grasses for range stock.

The date crop in the Salt River Valley is unusually large this year, and unless heavy rains fall in October, a full crop will be gathered. Lemons ripened during the first week in September, one month earlier than in the preceding year. The gathering of the almond crop ended early in September. It was the largest crop ever grown in the Salt River Valley. The orange crop promises a large yield.

The experiments made in the planting of Egyptian cotton in the lower Colorado and the Salt River valleys, by the Department of Agriculture, during the spring of 1909, have given good results. Picking is still in progress at Buckeye, Phoenix, Sacaton, and Yuma, Ariz.

FLOOD ON THE SAN JUAN RIVER SEPTEMBER, 1909

By W. B. FREEMAN, District Engineer, Geological Survey.

On September 5 and 6, 1909, a very heavy flood took place on the San Juan River and tributaries in southwestern Colorado and northwestern New Mexico. It is stated by the oldest residents in the vicinity of Aztec and Farmington that both the Animas and San Juan rivers reached higher stages during this flood than at any time since the country has been settled; and there was even a statement to the effect that the Indians had no memory of a time when the San Juan was so high.

The high water was caused by heavy and continuous rains at the headwaters and all along the courses of these streams. The upper San Juan itself and all its tributaries from the Piedra westward to and beyond the La Plata, from the north, were simultaneously in flood with the Canyon Largo and other large perennial tributaries from the south, all of which are capable of carrying enormous quantities of water. The Canyon Largo, for instance, has a main water course upwards of 70 miles long, and tributaries 40 or 50 miles long, so that it drains a very large area which at times is subject to an excessive run-off.

The effect of the combined flow of these streams can readily be imagined, and there was the usual resultant damage. In

Colorado, the Denver and Rio Grande Railroad sustained the greater part of the loss. Along the Animas River, between Silverton and Durango, the railroad tracks were washed out in many stretches, and at others covered with immense deposits of sediment. Traffic on this branch was suspended for about three weeks. The cost to the railroad company amounted to a great many thousand dollars, but no estimate of the loss has been obtained. The Animas River did considerable damage in the town of Durango and surrounding country.

The Pine River was in heavy flood and overflowed its banks in many places. At La Boca the river took out the approach embankment to the railroad bridge on the right bank. It has since been necessary to construct a pile span to replace this embankment. Spring Creek, which flows into the Pine River near this point, was very high, and where it follows along the railroad the latter was washed out in several places. A locomotive went into the ditch at a small railroad trestle on this creek. The Piedra and upper San Juan were also at a very high stage.

In San Juan County, New Mexico, the principal loss was sustained by the Farmington branch of the Denver and Rio Grande Railroad; by the county, through the washing out of the suspension bridge across the San Juan at Blanco; and by the farmers through the overflow of their lands by the flood waters of the Animas and San Juan rivers. The extent of the total loss in that county is not known, but it is believed to be not less than \$20,000; the Blanco Bridge alone cost about \$4,200.

The Flora Vista glade, which runs into the Animas River, carried a great deal of water and sediment, and did no little damage to the railroad track and the surrounding country both by washouts and the deposition of sediment. Other glades and arroyos were correspondingly high, though most of them are not in a position to do much damage.

The various streams in that section commenced to rise rapidly on Sunday, September 5, and by Sunday night they were at high stages. The maximum heights were obtained early Monday morning in the upper reaches of these streams, and about 10 o'clock on Monday night in the vicinity of Farmington.

The rainfall was quite general. As far west as Fruitland there was about seven-tenths of an inch of precipitation during the first six days of September, most of which fell on the sixth; and as far east as Chama, the rainfall amounted to 1.6 inches from September 1 to 6. At Durango, Colo., the rainfall was 3.6 inches during the above period, of which 1.64 inches fell on September 5 and 0.82 inch on September 6. The combined precipitation on September 5 and 6 at various points was as follows: Silverton, 2.50 inches; Hesperus, 2.70 inches; Mancos, 1.40 inches; Ignacio, 0.90 inch; Pagosa Springs, 1.90 inches.

The San Miguel River was in heavy flood at this same time, and the bursting of the Trout Lake Reservoir dam caused the destruction of a great deal of the property below. Several miles of railroad track were damaged or entirely washed away.

The San Juan River, at Arboles, Colo., above the most important tributaries, was at a very high stage and probably reached its maximum on Sunday night. At Blanco, N. Mex., above the Canyon Largo, the U. S. Geological Survey and Territorial gage read 10 feet on Sunday evening, and at 6 a. m. Monday, September 6, when the county suspension bridge was washed out, the maximum gage height was about 11 feet. The maximum discharge there was not less than 15,000 second-feet. At Bloomfield, 12 miles below the mouth of the Canyon Largo, the river had a flood cross-section of 1,800 square feet and a maximum discharge estimated from 18,000 to 20,000 second-

feet. The river overflowed the bottom lands all along its course, and in many places the course of the channel was entirely changed. At one place part of an orchard was washed into the river, and at another a house was carried away when the bank caved in. At the county bridge at Farmington, below the mouth of the Animas, the river reached a maximum height late on Monday evening. The gage height was in the neighborhood of 12.3 on the old U. S. Geological Survey gage, cross-sectional area 3,200 square feet, and the estimated discharge not less than 35,000 second-feet. At this place the river overflowed the right bank for a distance of about 100 yards beyond the end of the bridge, but the latter was not damaged in any way.

The Animas River, at Durango, reached a maximum height of 8.50 at the Power Company's gage between 4 and 6 a. m., Monday, September 6. The maximum discharge was estimated to be over 10,000 second-feet. Between 6 and 7 p. m. on Monday the maximum height of 11 feet was reached on the U. S. Geological Survey and Territorial Engineers gage at Aztec, N. Mex., and between 10 and 11 p. m. the maximum gage height at the old U. S. Geological Survey gage at Farmington was 11.1 feet. At Aztec the river overflowed the right bank for a distance of 800 feet beyond the end of the suspension bridge, the water being from five-tenths to 2 feet in depth; and at Farmington the river was over its right bank for a distance of a quarter of a mile; the fair grounds and race track there were entirely submerged.

The flood cross section at Aztec was about 3,100 square feet, and the estimated discharge was 16,000 second-feet. At Farmington the maximum discharge was probably from 18,000 to 20,000 second feet.

The La Plata River attained a maximum gage height of 7.60 feet on the U. S. Geological Survey and Territorial Engineers gage at La Plata, N. Mex., on Sunday night, September 5, and it is estimated that the maximum discharge was from 6,000 to 7,000 second-feet. The left bank was overflowed for a distance of 1,000 feet, and the cross-sectional area of the overflow was 1,300 square feet, while the cross sectional area of the main channel was only 224 square feet. It is estimated that the channel under the bridge at La Plata carried a maximum of 3,000 second-feet, while the overflow amounted to as much or more than that amount.

During this flood on the San Juan River probably over 100,000 acre-feet of flood waters went to waste and were allowed to do a great deal of damage to the surrounding country. Had these waters been properly stored in any of the numerous reservoirs contemplated in San Juan County, such as the proposed San Juan Reservoir, all of this damage could have been prevented and the waters used for the irrigation of a large acreage.

It is true that a flood of this magnitude is not likely to occur for a number of years, and it is also true that it is not necessary to store these excessive flood water for irrigation purposes. The San Juan River is a magnificent stream and its normal flow is ample for the irrigation of all the lands which it will be possible to put under cultivation for a number of years to come; however, some storage is necessary on the San Juan, as on any other river in the West. In the latter part of September of this year the flow of the San Juan River above the mouth of the Animas was only 1,100 second feet, and of the Animas River, at Aztec, 800 second-feet. These flows were considerably above the normal for that period of the year.

TABLE 1.—Climatological data for September, 1909. District No. 9, Colorado Valley.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelting.	Number of rainy days, 0.1 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Daniel	Uinta	6,740	10	48.5	+ 2.1	74	27†	15	23	49	1.35	+ 0.56	0.57	T.	5	11	13	7	nw.	J. M. Van Dervort.
Dixon	Carbon																			Carey O. Morgan.
Eden	Sweetwater	6,577		53.4		78	27†	16	23†	52	0.91		0.36	0.0	5	17	7	6	w.	Eden Valley Ld & Ir. Co.
Fontenelle	Uinta	6,400	3																	C. W. Holden.
Green River	Sweetwater	6,083	4	56.0		87	2	19	23	57	0.54		0.31	0.0	5	15	9	6	w.	Geo. H. Maxom.
Kendall	Fremont	7,630																		Art. Doyle.
Pinedale	do.	7,187	3																	Forest Service.
Willow Creek Cabin	do.	7,500	1																	John L. Allen.
Colorado.																				
Ashcroft	Pitkin	9,433	8	47.4		73	2†	18	23	41	3.75		0.57	0.0	16					Dan McArthur.
Breckenridge	Summit	9,536	19	44.6 ^a	- 2.1	70	28†	7 ^a	23	50 ^a	1.86	+ 0.52	0.50	4.0	10	1	20	8	se.	Mrs. J. G. Thompson.
Cascade	San Juan	8,900	3																	San Juan P. & W. Co.
Chromo	Archuleta	7,500	3	52.5		80	3	20	23	58	2.32		0.79	0.0	9	20	3	7	sw.	Lawrence Nolan.
Cochetopa	Saguache	9,088																		Beasie McDonough.
Collbran	Mesa	6,000	16	58.0	- 1.5	70	2†	28	24	47	2.33	+ 0.97	0.79	0.0	8	18	9	3	sw.	A. A. Wood.
Columbine	Routt	8,768																		Jas. H. Caron.
Columbine Ranch	Delta	8,925																		Geo. W. Wade.
Corona	Grand	11,660	2	38.2		58	2†	14	22†	28	3.58		0.76	17.5	14					U. S. Weather Bureau.
Crawford (near)	Montrose	6,600		58.1		84	2	28	22	34	1.89		0.83	0.0	8	19	8	3		C. W. Roe.
Crested Butte	Gunnison	8,867									2.00		0.93	0.0	9	10	8	12	w.	Charles L. Ross.
De Beque	Mesa	4,935																		C. M. Paing.
Delta	Delta	4,965	18	63.9	+ 1.4	90	2†	29	23	51	1.08	+ 0.23	0.73	0.0	4	22	3	5		E. M. Getta.
Dillon	Summit	8,800									1.27		0.40	4.2	12	3	19	8	n.	Harry T. Hamilton.
Dolores	Dolores	6,500		59.0		82	1	32	21†	43	1.45		0.48	0.0	6	13	14	3	se.	Geo. R. Simmons, Jr.
Dunkley	Routt	7,430	3																	Geo. W. Dunkley.
Durango	La Plata	6,534	16	57.4	- 0.8	80	3	31	23	42	3.63	+ 1.70	2.01	0.0	8	13	13	4	nw.	U. S. Weather Bureau.
Eagle	Eagle	6,598	4	53.4		80	2	18 ^a	23	48 ^a	1.37		0.48	0.0	6	20	7	3	w.	J. M. Witterman.
Eureka	San Juan	10,000	2																	San Juan P. & W. Co.
Fruita	Mesa	4,510	10	62.2	- 1.3	86	3†	30	22†	53	1.68	+ 0.46	0.55	0.0	7	18	9	3	se.	J. B. Willea.
Gladstone	San Juan	10,400	3																	San Juan W. & P. Co.
Glenwood Springs (near)	Garfield	5,823	11								2.06	+ 1.37	0.28	0.0	13	17	0	13	w.	E. A. O'Neil.
Grand Junction	Mesa	4,608	18	64.6	- 1.8	87	3	39	22	37	1.13	+ 0.18	0.52	0.0	6	17	10	3	e.	U. S. Weather Bureau.
Grand Lake	Grand	8,153									0.60		0.35	T.	2	25	0	5		Mrs. Belle Kauffman.
Grand Valley	Garfield	5,089	17	62.3	- 0.2	88	3	27	23	52	1.90	+ 0.47	0.88	0.0	8	15	12	3		David Evans.
Gunnison	Gunnison	7,670	16	54.1	+ 2.3	86	1	19	23	45	2.17	+ 1.50	0.75	0.0	9	14	12	4	sw.	Clarence Adams.
Hayden	Routt	6,337																		C. W. Harkness.
Hesperus	La Plata	8,870	11								3.78	+ 2.62	1.99	0.0	8	22	4	4		John S. Spear.
Horsefly	Montrose	8,700																		Lawrence J. Finch.
Ignacio	La Plata	6,425									1.21		0.50	0.0	7	16	10	4	w.	Elizabeth Schalles.
Ironton	Ouray	10,000																		P. H. Foley.
Kremmling (near)	Grand	7,337	1	52.0		78	26	20	23	50	1.06		0.38	T.	10	19	3	8		H. A. Howe.
Lake City	Hinsdale	8,686	4	52.0		74	2	22	23	44	1.76		0.60	4.0	8	11	11	8	sw.	W. H. Ogle.
Lay	Routt	6,190	15	55.2	- 1.2	82	3†	18	23	51	1.68	+ 0.26	0.91	4.0	6	15	3	12	s.	A. G. Wallihan.
Lujane	Montrose	6,620	3	62.9		87	9	23	22	43	2.70		0.63	0.0	9	20	2	8	sw.	T. T. Richards.
Mancos	Montezuma	6,960	10	56.4	- 1.0	78	3	26	22	40	2.38	+ 0.93	0.99	0.0	7	19	8	3	sw.	B. M. Krupanitsky.
Marble	Gunnison	7,951		52.6		78	26	21	23	46	2.30		0.56	0.0	12	18	8	4	e.	Homer Harrington.
Marshall Pass	Saguache	10,846	6								2.71		1.00	8.0	7	18	6	6	w.	William D. Lillard.
Meeker	Rio Blanco	6,182	17	54.6	- 1.0	80	2†	21	22	47	1.95	+ 0.17	0.90	0.0	5	20	7	3	sw.	T. Baker.
Montrose (near)	Montrose	5,811	20	57.6	- 2.9	80	2†	26	22†	45	1.87	+ 0.92	0.83	0.0	8	3	26	1		R. Butterfield.
Nast	Pitkin	7,953									1.12		0.41	T.	6	21	4	5	w.	Arthur Hanthorn.
Pagoda	Routt	6,500	13	54.6	- 0.7	84	2	20	23	50	2.48	+ 1.05	1.10	0.0	6	21	7	2		Shaw Brothers.
Pagosa Springs	Archuleta	7,108	2	53.6		79	2†	20	23	52	3.10		1.40	0.0	8	16	7	7	sw.	E. T. Walker.
Paonia	Delta	5,694	8	61.8		85	2	34	22†	39	1.82		0.72	0.0	4	12	16	2	sw.	J. M. Underwood.
Parshall	Grand										0.81		0.52	0.0	6					F. A. Field.
Pitkin	Gunnison	9,500									2.63		1.05	2.0	6	17	8	5		Mrs. Maggie Cammann.
Rangely	Rio Blanco	5,050	10	59.0	+ 1.3	85	2	28	24	46	1.80	+ 0.35	0.56	0.0	6	11	15	4	w.	Mrs. C. P. Hill.
Redcliff	Eagle	8,695	14																	Dorothea Greiner.
Rico	Dolores	8,324	8																	Clinton B. Smith.
River Portal	Montrose	6,570	3	57.7		81	1†	28	22	47	1.67		0.60	0.0	8	16	5	9		J. Dill.
Sapinero	Gunnison	8,125	9	49.3		75	2	21	23	42	2.67		0.78	1.5	13	17	8	5	w.	W. F. Irving.
Silt	Garfield	5,441	13	59.6	- 1.7	87	3†	27	23	50	0.53	- 0.89	0.23	0.0	6	20	7	3	w.	W. S. Park.
Silverton (1)	San Juan	9,235	5	48.8		71	30	22	23	43	3.34		2.00	0.0	5	15	6	9	nw.	V. E. Kerr.
Silverton (2)	do.	9,400	3																	San Juan P. & W. Co.
Spruce Lodge	Grand	9,600	1								2.65		0.45	11.5	11					H. J. Wills.
Steamboat Springs	Routt	6,683		53.3 ^a		81 ^a	27†	16	23	57 ^a	2.31		0.61	3.0	10	21	4	5		M. Elliot Houston.
Tacoma	La Plata	7,300	3																	San Juan P. & W. Co.
Terminal Dam	do.	8,300	3																	Do.
Uncompahgre Plateau	Montrose	8,400																		Martin Easer.
Whitepine	Gunnison	9,500	8	45.3		69	17	19	21†	41	2.75		2.00	6.0	2	16	11	3	s.	C. E. Macy.
Yampa	Routt	8,000									1.98		0.72	T.	7	8	19	3	s.	Percy A. Hughes.
Utah.																				
Aneth	San Juan	4,800	8																	Maude A. Palmer.
Baker	do.	7,560									2.40		1.10	0.0	5	21	1	8	sw.	E. H. Wolf.
Basin	Grand	9,500									2.32		0.48	2.0	8	7	19	4	sw.	James Jeffa.
Castle Dale	Emery	5,500	10	59.7	+ 1.6	86	10	27	22	36	1.60	+ 0.98	0.75	0.0	4	19	10	1		H. J. Cooper.
Dragon	Uinta		1																	U. S. Forest Service.
Dyer Mountain	do.	10,000																		Do.
Elkhorn	do.	7,000																		H. C. Wickman.
Emery	Emery	6,260	9	60.0	+ 4.5	86	1†	29	19	49	3.48	+ 2.70	1.30	0.0	5	3	11	16	sw.	Geo. H. Barney.
Escalante	Garfield	5,700	9	58.2	+ 2.4	79	3	35	23†	39	2.61	+ 1.63	1.25	0.0	8	17	0	13		Joseph T. Atkin.
Experiment Station	Washington	2,880	5																	H. Curtis.
Fort Duchesne	Uinta	5,000	21	60.6	+ 0.0	86	2†	28	23	44	0.67	- 0.54	0.37	0.0	3	18	10	2	w.	Joseph A. Lyman.
Grayson	San Juan	5,750	5	63.0	+ 1.2	84	3†	32	23	49	1.40	- 0.75	1.25	0.0	2	18	4	8	s.	B. F. Miller.
Green River	Emery	4,080	12								0.89	+ 0.14	0.37	0.0	6	22	6	2		John P. Hite.
Hite	Garfield	3,000	10	72.2	- 0.1	96	3	47	23	35	1.70	+ 0.68	0.59	0.0	6	18	11	1		W. T. Dobson.
Kanab	Kane	4,925	16																	Gertrude W. Carpenter.
La Sal	San Juan	7,000	9	57.6	- 0.1	78	3	25	22	38	1.40	+ 0.03	0.47	0.0	7	14	13	3		Michael Hansen.
Loa	Wayne	7,000	17	52.0	- 1.1	78	2†	25	22†	37	0.75	+ 0.20	0.20	0.0	5					J. A. Gardner.
Mill Canyon	Washington	8,400									0.70		0.40	0.0	5					Henry Crouse.
Moab	Grand	4,000	20	66.2	+ 0.4	92	3	32	23	51	1.17	+ 0.07	0.41	0.0	7	14	10	6		D. B. Perkins.
Monticello	San Juan		1																	

TABLE 1.—Climatological data for September, 1909. District No. 9—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, of inch or more.	Number of clear days.	Number of partly cloudy days.			Number of cloudy days.
Utah—Cont'd.																				
Teasdale	Wayne	7,000	1								1.75		1.00	0.0	5					Josiah Shurts.
Theodore	Wasatch	5,507	4	59.0	+ 0.4	82	3	27	22	44	2.72	+ 1.80	1.69	0.0	5	1	12	4		L. Claire Winslow.
Tropic	Garfield	7,000	12	57.8	+ 0.4	82	20	30	23	44	2.45	+ 1.40	1.89	0.0	4	15	12	3	sw.	E. P. Bolton.
Vernal	Uinta	5,380	14																	Joab Collier.
Wellington	Carbon	5,540	10	55.3	- 2.7	80	1	26	23	43										Melville Branch.
New Mexico.																				
Blackrock	McKinley		12	61.6				35	33	13	1.69		0.60	0.0	7	13	16	1	w.	Wm. J. Oliver.
Bloomfield	San Juan	5,500	13	61.6	- 2.6	90	3	30	23	43	1.25	+ 0.42	1.00	0.0	3	15	11	4	sw.	Fred Le Clerc.
Cambray	Luna	4,215	11								1.25	- 0.25	0.50	0.0	3	17	0	13		Agent, Southern Pac. Ry.
Cliff	Grant	4,470	11	68.2	- 2.6	97	21	35	27	50	1.82	- 0.19	0.97	0.0	5	5	11	11	sw.	T. J. Clark, sr.
Columbus	Luna	4,054									0.32		0.19	0.0		17	2	11		Agent, E. P. & S. W. R. R.
Deming	do.	4,333	33	70.2		95	3	48	14	38	0.88	- 0.51	0.85	0.0	3	20	4	6	w.	Agent, Southern Pac. Ry.
Dulce	Rio Arriba	6,767	3	57.2		82	21	29	28	42	0.55		0.30	0.0	2	21	8	1		W. A. Fuller.
Fort Bayard	Grant	6,152	35	66.6	+ 0.2	89	2	45	13	37	1.55	- 0.41	0.60	0.0	4	28	2	0	nw.	U. S. A. Gen'l Hospital.
Fort Wingate	McKinley	6,997	46	58.4	- 4.0	82	2	28	13	42	4.56	+ 3.21	1.20	0.0	9	16	5	9	sw.	Medical Corps, U. S. A.
Frisco	Socorro	5,800	3	67.1		90	2	47	13	36	2.08		0.77	0.0	5	16	13	1	sw.	John R. Milligan.
Fruitland	San Juan	4,800	17	63.8	+ 0.5	87	21	30	23	48	0.95	+ 0.21	0.65	0.0	2	24	5	1	w.	Cyril Jas. Collier.
Gage	Luna	4,486	5	70.0		98	1	46	30	41	0.45	- 0.74	0.25	0.0	2	11	14	5	e.	Agent, Southern Pac. Ry.
Hachita	Grant	4,504									0.26		0.16	0.0	3	20	7	3	nw.	Agent E. P. & S. W. R. R.
Hermance	Luna	4,451									0.27		0.27	0.0	1					Do.
Lordsburg	Grant	4,245			- 2.4	97	2	47	29	42	6.95	- 0.04	0.40	0.0	3	13	6	11	e.	Agent Southern Pac. Ry.
Luna (near)	Socorro	7,300	5	55.7		80	2	28	14	43	2.18		1.37	0.0	5	18	22	0	w.	C. B. Martin.
Manuelito	McKinley	6,252	5	63.9		87	17	30	24	54	1.81		0.50	0.0	8	9	13	8	sw.	W. A. L. Tarr.
Mimbres	Grant	5,007	3								1.61		0.55	0.0	5	19	9	2	nw.	Charles Dennis.
Pratt	do.	4,415									1.53		1.05	0.0	3	23	3	4	e.	Agent, E. P. & S. W. R. R.
Redrock	do.	4,150	5								1.52		0.84	0.0	4	18	10	2		Robt. H. Woods.
Rodeo	do.	4,118	1								1.20		0.70	0.0	7	19	4	7		Agent, E. P. & S. W. R. R.
Rosa	Rio Arriba	6,000	5																	B. A. Candelario.
Arizona.																				
Allaire's Ranch	Cochise	4,184	13								0.82	- 0.20	0.37	0.0	4	21	4	5	e.	Thos. Allaire.
Arizona Canal Dam	Maricopa	1,372		82.0	- 1.1	104	24	60	21	35	0.90	+ 0.23	0.48	0.0	4	16	8	6	s.	U. S. Reclamat'n Service.
Astec	Yuma	492	9	83.2	- 4.2	104	14	55	30	42	0.94	+ 0.67	0.64	0.0	4	22	7	1	ne.	Agent, Southern Pac. Ry.
Benson	Cochise	3,523	26	73.0	- 3.9	97	4	49	14	41	0.89	- 0.03	0.30	0.0	6	11	9	10	e.	Do.
Blabee	do.	5,500	19	67.2	- 3.0	83	21	51	14	25	0.65	- 1.15	0.37	0.0	7	21	4	6	se.	Rev. J. G. Pritchard.
Bonita	Graham	4,916	30								1.82	+ 0.18	0.74	0.0	4	16	8	6	w.	A. Johnson & Co.
Bowie	Cochise	3,756	9	73.4	- 0.2	95	21	50	14	40	0.40	- 0.80	0.20	0.0	3	23	0	7	e.	Agent, Southern Pac. Ry.
Buckeye	Maricopa	980	17	81.3	+ 1.0	105	24	50	30	49	1.73	+ 1.15	1.49	0.0	3	23	6	1	e.	H. E. Kell.
Casa Grande	Pinal	1,396	28																	Agent, Southern Pac. Ry.
Casa Grande Ruins	do.	1,422	1	82.2		107	24	55	21	45	0.96		0.38	0.0	5	17	11	2	w.	F. Pinkley.
Cave Creek	Maricopa	1,520	2	77.8		102	24	51	19	45	0.75		0.35	0.0	5	17	10	3		E. H. Howard.
Chin Lee	Apache	6,090	1	62.7		88	3	31	23	46	1.63		0.82	0.0	5	21	5	4	sw.	Fr. L. Osterman, O. F. M.
Chilsons Mill	Graham	8,000	4	59.6		82	25	42	20	32	2.67		1.20	0.0	5	14	11	5		H. R. Chlarson.
Clifton	do.	3,584	17	77.4		99	21	50	13	37	0.66	- 1.09	0.50	0.0	3	22	8	0		W. B. Cramer.
Cline	Gila	2,300	8	74.6	- 0.6	96	24	51	17	40	1.10	+ 0.14	0.70	0.0	3	15	11	4	sw.	W. M. Clanton.
Cochise	Cochise	4,214	11	70.1	- 3.0	92	41	42	29	48	6.66	- 0.25	0.44	0.0	3	16	10	4	nw.	Agent Southern Pac. Ry.
Columbia	Yavapai	1,900	9	83.1	+ 2.1	104	24	68	20	29	0.49		0.25	0.0	3	19	4	7	sw.	M. J. Nolan.
Congress	do.	3,688	13	76.4	- 2.8	93	24	62	30	26	0.41	- 0.24	0.41	0.0	1	22	3	5	sw.	Assayer, Congress Mine.
Dos Cabezas	Cochise	5,250	1	68.2		92	2	46	22	43	1.53		0.92	0.0	3	16	13	1	e.	N. Erickson.
Douglas	do.	3,930	6	74.6		100	2	48	20	45	0.66		0.31	0.0	5	24	5	1	sw.	Dr. F. T. Wright.
Dudleyville	Pinal	2,204	18	73.8	- 3.0	96	24	49	14	40	1.14	- 0.10	0.97	0.0	5	8	16	6	sw.	G. F. Cook.
Flagstaff (1)	Coconino	6,907	17	55.0	+ 0.1	76	3	32	22	42	1.74	- 0.35	1.39	T.	8	18	7	5	sw.	U. S. Weather Bureau.
Flagstaff (2)	do.	7,452	4																	C. C. Moers.
Flagstaff (3)	do.	7,500	1	53.8		74	31	28	30	40	1.45		0.58	0.0	7	16	12	8	nw.	U. S. Forest Service.
Florence	Pinal	1,504	9	81.2	+ 0.4	108	24	59	18	40	0.37		0.18	0.0	4	19	5	6	sw.	Agent, P. & E. R. R.
Fort Apache	Navajo	5,200	30	65.7	- 0.1	90	2	38	13	43	3.06	+ 1.46	1.69	0.0	5	21	8	1	ne.	Post Surgeon.
Fort Huachuca	Cochise	5,100	23	72.6	+ 1.8	94	23	49	20	40	1.65	- 0.34	0.70	0.0	6	17	2	11	se.	Do.
Fort Mohave	Mohave	604	20	81.2	- 3.6	107	9	56	29	37	0.53	+ 0.43	0.48	0.0	2	22	6	2	e.	A. F. Duclos.
Gilabed	Maricopa	737	18	84.2	- 1.8	108	10	58	30	43	0.12	- 0.14	0.12	0.0	1	23	5	2	e.	Agent, Southern Pac. Ry.
Globe	Gila	3,525	8	73.1		95	3	51	13	38	1.58		1.07	0.0	4	10	19	1	nw.	Dr. B. G. Fox.
Grand Canyon (1)	Coconino	6,866	5	57.4		80	8	34	26	40	1.07		0.64	0.0	6	14	1	15	sw.	Agent, Santa Fe R. R.
Grand Canyon (2)	do.	3,676	2	72.0		90	2	51	11	33	0.59		0.42	0.0	3	19	7	4	sw.	C. C. Spaulding.
Greer	Apache	9,200									2.71		1.00	0.0	8	12	11	7		Mrs. M. Butler.
Holbrook	Navajo	5,069	18	65.6	- 0.1	88	21	39	13	43	0.31	- 0.47	0.14	0.0	3	23	5	2	sw.	Thorwald Larson.
Intake	Gila	2,230	4								1.35		0.82	0.0	4	18	6	6	w.	A. H. Neal.
Jerome	Yavapai	4,743	12	70.0	- 2.6	87	24	52	13	28	1.29	+ 6.11	1.07	0.0	3	23	6	1	s.	Dr. L. A. Hawkins.
Keams Canyon	Navajo	4		61.1		82	2	23	13	38	0.80		0.60	0.0	2	17	13	0	se.	L. R. Ballard.
Kingman	Mohave	3,326		71.3		95	24	39	30	47	1.25		0.41	0.0	5	20	7	3	sw.	G. R. Gooding.
Maricopa	Pinal	1,186	29	83.6	- 1.4	109	14	60	16	46	0.50	+ 0.02	0.22	0.0	5	20	6	4	sw.	Agent, Southern Pac. Ry.
Mesa	Maricopa	1,244	14	82.8	+ 1															

TABLE 1.—Climatological data for September, 1909. District No. 9—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days .01 inch or more.	Number of clear days.	Number of partly cloudy days.			Number of cloudy days.
Arizona—Cont'd.																				
Thatcher.....	Graham.....	2,800	...	73.2	.....	100	3	45	19	47	1.22	.....	0.90	0.0	4	18	10	2	se.	Prof. J. H. Larson.
Tombstone.....	Cochise.....	4,550	14	71.2	- 1.4	89	1†	52	13	34	1.81	+ 0.09	0.89	0.0	6	15	13	2	...	F. N. Walcott.
Tuba.....	Coconino.....	4,500	9	65.0	- 2.6	89	3	40	13†	46	0.56	.....	0.22	0.0	4	14	9	7	ne.	G. H. Kraus.
Tucson (1).....	Pima.....	2,390	29	77.8	- 2.5	100	2†	52	20	43	1.25	+ 0.37	1.06	0.0	5	6	24	0	w.	University of Arizona.
Tucson (2).....	do.....	2,380	1	77.0	.....	102	3†	47	29	52	0.85	.....	0.58	0.0	2	11	19	0	...	H. G. Brown.
Upper San Pedro.....	Cochise.....	5,000	...	...	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	B. T. Stuart.
Vail.....	Pima.....	3,421	11	76.4	- 3.4	101	2	50	19	44	1.95	+ 1.40	1.40	0.0	5	12	15	3	sw.	Agent, Southern Pac. Ry.
Walnut Grove.....	Yavapai.....	3,649	19	...	.....	...	...	...	...	...	1.15	+ 0.43	0.58	0.0	3	17	10	3	...	J. O. Carter.
Wickenburg.....	Maricopa.....	2,072	2	82.0	+ 6.0	106	24	60	21†	39	0.51	- 0.09	0.22	0.0	5	13	15	2	sw.	Agent, P. & P. R. R.
Willcox.....	Cochise.....	4,164	29	70.2	- 2.7	93	3	42	22	44	1.00	+ 0.07	0.48	0.0	3	11	3	16	sw.	Agent, Southern Pac. Ry.
Williams.....	Coconino.....	6,750	10	62.2	+ 2.0	83	24	40	22	38	0.78	.....	0.33	0.0	5	22	1	7	ne.	H. Victor.
Winslow.....	Navajo.....	4,853	1	67.2	.....	92	24	37	14	49	0.23	.....	0.20	0.0	12	19	7	4	...	L. C. Henning.
Yarnell.....	Yavapai.....	4,700	11	...	.....	...	...	...	...	...	1.99	+ 0.94	1.31	0.0	3	15	4	11	s.	E. L. Bartholomew.
Yuma (1).....	Yuma.....	141	30	82.7	- 1.2	105	9	52	30	44	0.96	+ 0.80	0.95	0.0	2	28	2	0	ne.	U. S. Weather Bureau.
Yuma (2).....	do.....	150	2	79.2	.....	103	9	47	30	48	0.63	.....	0.60	0.0	2	20	10	0	sw.	E. L. Crane.
Nevada.																				
Caliente.....	Lincoln.....	2,033	2	72.8	.....	100	10	40	25	51	0.84	.....	0.65	0.0	3	...	...	...	nw.	Agent, Salt Lake Route.
Las Vegas.....	Clark.....	1,700	3	75.4	.....	99	9	44	23	49	0.58	.....	0.37	0.0	4	20	7	3	n.	Roy M. Filcher.
Logan.....	do.....	1,700	3	75.4	.....	99	9	44	23	49	0.58	.....	0.37	0.0	4	20	7	3	n.	Roy M. Filcher.

* Precipitation included in that of the next measurement.

** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.

† Also on other dates.

‡ Data are from standard instruments not supplied by the U. S. Weather Bureau.

§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

|| Estimated by observer.

¶ Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

a, b, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2.—Daily precipitation for September, 1909. District No. 9, Colorado Valley.

Stations.	River basins.	Day of month.																															Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Wyoming.																																			
Daniel.....	Green.....	.57	.10			T.	.35					.28	.05								T.	T.	T.											1.35	
Dixon.....	do.....																																		
Eden.....	do.....	.28					.14		.12		.01	.36						T.																0.91	
Fontenelle.....	do.....																																		
Green River.....	do.....	.03		.05	T.	T.	T.	.31	.02		T.	.13																						0.54	
Kendall.....	do.....																																		
Pinedale.....	do.....																																		
Willow Creek Cabin.....	do.....																																		
Colorado.																																			
Ashcroft.....	Grand.....	.03	.02	.20	.33	.57	.32	.05	.25	.03	.04	.02	.31	.45	.05					.04		.04												2.75	
Breckenridge.....	do.....	.03	.10	.14	.24	.19	.09		.29				.13	.50				T.				.10	T.											1.86	
Cascade.....	San Juan.....																																		
Chromo.....	do.....	.15	.03	.27	.18	.79	.37	.30				.07	.16																					2.32	
Cochetopa.....	Gunnison.....	.01	.21	.35	.08	.30	.15	.17	.05	.23	.06		.45	.25				.02	T.															2.33	
Collbran.....	Grand.....	.07	.32	.01		.66	.34	.01	.02				.79																					2.32	
Columbine.....	Yampa.....																																		
Columbine Ranch.....	Gunnison.....																																		
Corona.....	Grand.....	.30	.04		.12	.38	.20	.76	.20	.10	.10		.04	.74	.12							T.	.44												3.58
Crawford.....	Gunnison.....	.17	.08	.04	.83	.30	.01	.19	T.		T.		.27																					1.89	
Crested Butte.....	do.....	.10	.16	.18	.05	.93	.30	.05		.05		T.	.24																					2.00	
De Beque.....	Grand.....																																		
Delta.....	Gunnison.....	.02				.73	.18						.15																					1.08	
Dillon.....	Grand.....	.20	.01	.05	.10	T.	T.	.15	.06	.02	.20	.04	T.	.40	T.	T.	T.	T.		T.	.02	T.	.02	T.					T.				1.27		
Dolores.....	Dolores.....	.11	.16		.10	.41	.43						.19																					1.45	
Dunkley.....	Yampa.....																																		
Durango.....	San Juan.....	.50	.19	.04	.37	1.04	.82	.01				T.	.06																					3.63	
Eagle.....	Grand.....																																		
Eureka.....	San Juan.....																																		
Fruit.....	Grand.....	.55	T.	.23	T.	.17	.23				.03	.07	.30																					1.58	
Gladstone.....	San Juan.....																																		
Glenwood Springs.....	Grand.....	.28	.19	.20	.17	.18	.28	.24	.10	.12	.07	.12	.11	T.																				2.06	
Grand Junction.....	do.....	T.	T.	.10	.01	.28	.40	.06			T.	.28																						1.13	
Grand Lake.....	do.....																																		0.60
Grand Valley.....	do.....	.03		.02	.21	.33	.88	.03	.02				.38																					1.90	
Gunnison.....	Gunnison.....	.02	.03		.35	.75	.16			.09	.03		.71							.03														2.17	
Hayden.....	Yampa.....																																		
Hesperus.....	San Juan.....	.40	.06	.15	.04	1.99	.69	.29	T.			T.	.16																					3.78	
Horsely.....	Gunnison.....																																		
Ignacio.....	San Juan.....	.06	T.	T.	.04	.50	.37	.12				.01	.11																					1.21	
Ironton.....	Gunnison.....																																		
Kremmling.....	Grand.....	.07		.01	.02	.12	.11	.38	.26	.01	T.	.07							.01				T.											1.06	
Lake City.....	Gunnison.....		T.	.10	.05	.60	.09	.02	.14	T.	T.		.52	.24				T.																1.76	
Lay.....	Yampa.....	.05	T.		.10	.01	.20	.16	.02				.34																					1.68	
Lodgepole.....	Gunnison.....	.12	.63	.07	.22	.57	.35	.13		T.			.23	.45																				2.79	
Manitou.....	San Juan.....	.13	.29	.04	.99	.42	T.			.25	T.	.23	.33																					2.38	
Marble.....	Grand.....	.06	.13	.40	*	.58	.19	.33	.08		.23	.25	.05					.02																2.30	
Marshall Pass.....	Gunnison.....				.30	1.00	.65	.04	.09				.18	.45																				2.71	
Meeker.....	White.....			.05	.90	.90						.08	.02																					1.95	
Montrose.....	Gunnison.....	.04	.20	.03	.23	.83	.16	.08	T.	T.	T.	.18	.41							.04														1.87	
Nast.....	Grand.....			.15	.15	.19							.18	.41																				1.12	
Pagoda.....	Yampa.....	T.	T.	.10	.10	.50	.04	.16	.04	T.	T.	.18	.41																					2.48	
Pagosa Springs.....	San Juan.....	.01		.18	.30	1.40	.47	.35		.16	.04	T.	.30	.09				T.		T.														3.10	
Panola.....	Gunnison.....	.24	T.	T.	T.	.72	.31					.55																						1.82	
Parshall.....	Grand.....			.05	.06	.08	.52	.06																.06										0.81	
Pitkin.....	Gunnison.....			T.	1.05	.40	.20	.25					.80	.13																				2.63	
Rangely.....	White.....	.14			.24	.37	.03						.56	.46																				1.80	
Redcliffe.....	Grand.....																																		
Rico.....	Dolores.....																																		
River Portal.....	Gunnison.....	.08	.44		.60	.23	.07		.05		.15								.05															1.67	
Sapinero.....	do.....	.06	.44	.04	T.	.78	.12	.37	.02	.04	.01	T.	.51</																						

TABLE 2.—Daily precipitation for September, 1909. District No. 9—Continued.

Stations.	River basins.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
New Mexico—Cont'd.																																		
Cambray.....	Mimbres.....					.40					.50	.35																					1.25	
Cliff.....	Gila.....					.97	.45			.08	.27	.05																					1.82	
Columbus.....	do.....				T.	.19				T.	.13	T.																					0.32	
Deming.....	do.....					.03					.85																						0.88	
Dulce.....	San Juan.....					.30	.25																										0.55	
Fort Bayard.....	Mimbres.....					.35	.60			T.	.35	.25																					1.55	
Fort Wingate.....	Little Colorado.....	.40		.32	1.20	.59	1.20		.13	.21	.01		.50																				4.56	
Frisco.....	Gila.....			T.		.77	.47			.29	.34	.25																					2.08	
Fruitland.....	San Juan.....	T.			T.	.30	.65						T.																				0.95	
Gage.....	Gila.....					.20					.25																						0.45	
Hachita.....	do.....			.07		.16					T.	.03																					0.26	
Hermanes.....	do.....			T.		.27				T.																							0.27	
Lordsburg.....	do.....					.40	.30				.25																						0.95	
Luna.....	do.....			.30	.04	1.37	T.	T.			.27	.20	T.						T.													2.18		
Manuelito.....	Little Colorado.....	.50			.56	.20	.01	.06	.01			.50		.03																			1.81	
Mimbres.....	Mimbres.....				.01	.55	.36				.26	.43																					1.61	
Pratt.....	Gila.....			T.		1.05					.10	.38																					1.53	
Redrock.....	do.....				.24		.84			.34		.10																					1.52	
Rodeo.....	do.....			.15	.17	.05	.06				.13	.04	.70																				1.20	
Rosa.....	San Juan.....																																	
Arizona.																																		
Allaires Ranch.....	Sonora.....			.07	.36	.37					.02																	T.					0.82	
Arizona Canal Dam.....	Salt.....				.21	.18																					.48	.03					0.90	
Astec.....	Gila.....				.04	.07																					.03	.20					0.94	
Benson.....	San Pedro.....	T.			.28	.30	.15			.13	T.																T.		.03		T.		0.89	
Bisbee.....	do.....				.08	.37	.06				.04	.02															T.	.02	.06		T.	T.	0.65	
Bonita.....	Mimbres.....				.16	.58	.34			.74		T.																					1.82	
Bowie.....	Gila.....				.05	.15				.20																							0.40	
Buckeye.....	do.....					1.49	.15																				.09	T.	T.				1.73	
Casa Grande.....	do.....																																	
Casa Grande Ruins.....	do.....				.16	.28	.17																				.38		.03				0.96	
Cavecreek.....	Verde.....				.15	.10	.06																				.09	.35	T.		T.		0.75	
Chin Lee.....	San Juan.....				.08	.83	.59	.11			T.		.03																				1.63	
Chilarsa Mills.....	Gila.....			.70	.02	.35	.40				1.20																						2.67	
Clifton.....	do.....				.10		.50				.03																						0.66	
Cline.....	Salt.....			.70	.20	.20																											1.10	
Cochise.....	Desert.....				.10	.12					.44																						0.66	
Columbia.....	Agua Fria.....				.25			.18																									0.49	
Congress.....	Hasayampa.....				.41	T.																					T.	T.					0.41	
Dos Cabezas.....	Desert.....	.25					.66				.92																						1.83	
Douglas.....	Sonora.....			.10	.31	.17				.03	T.	T.																.06	T.				0.66	
Dudleyville.....	Gila.....	T.	.04	T.		.40	.57				T.	T.																.03	T.	.10			1.14	
Flagstaff (1).....	Little Colorado.....	.01			.51	1.04	.06		.04	T.		.02	T.														.02	T.	.04				1.74	
Flagstaff (2).....	do.....					.58	.13		.17			.07	.05																				1.45	
Flagstaff (3).....	do.....	.40																															0.37	
Florence.....	Gila.....			.65	.18	.12																											3.06	
Fort Apache.....	Salt.....	.25	.12	.49	1.69	.51							T.																				1.65	
Fort Huachuca.....	San Pedro.....	.05			.65	.50	.25				.10		.70																				0.53	
Fort Mohave.....	Colorado.....				.48	T.	.05																										0.12	
Gilabend.....	Gila.....	T.				.12																											1.58	
Globe.....	Salt.....		.08		.10	.33	1.07																										1.07	
Grand Canyon (1).....	Colorado.....				.22	.68	.02					.01															.06		.03				0.59	
Grand Canyon (2).....	do.....	.11			.06		.42																										2.71	
Greer.....	Little Colorado.....			.15	.25	.75	1.00		.01	.30	.15	.10																					0.81	
Holbrook.....	do.....	.12	.05	T.	.14						T.	T.	T.																				1.35	
Intake.....	Salt.....			.50	.01	.82		.02																									1.26	
Jerome.....	Verde.....					1.07	.12																						.07				0.80	
Keams Canyon.....	Little Colorado.....					.66		T.				.20																					1.25	
Kingman.....	Colorado.....				.22	.08	.40	.41																					.14	T.	T.		0.50	
Maricopa.....	Gila.....	.02			.16	.22																							.04	T.	.06		0.72	
Mesa.....	Salt.....	T.		T.	.10	.16						.19																					0.14	
Mohawk Summit.....	Gila.....				.12																												1.62	
Natural Bridge.....	Ver																																	

TABLE 2—Daily precipitation for September, 1909. District No. 9—Continued.

Stations.	River basins.	Day of month.																														Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		31
<i>Nevada.</i>																																	
Caliente.....	Colorado.....					.09																					*	.65	.10				0.84
Las Vegas.....	do.....				.04																												0.59
Logan.....	do.....	T.					.37	.12																			T.	*	.05	T.			

TABLE 3.—Maximum and minimum temperatures at selected stations, September, 1909. District No. 9, Colorado Valley.

Date.	Wyoming.				Colorado.										Utah.										New Mexico.			
	Daniel.		Green River.		Durango.		Grand Junction.		Gunnison.		Meeker.		Steamboat Springs.		Emery.		Fort Duchesne.		Hite.		Moab.		St. George (Experiment station).		Fort Bayard.		Fort Wingate.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	68	50	79	58	72	57	84	63	86	51	76	53	49	49	81	61	90	64	90	65	88	58	88	55	78	58	58	
2...	72	45	87	49	78	52	83	58	79	46	80	47	49	49	86	54	93	63	88	58	88	58	88	55	82	54	54	
3...	72	36	86	49	80	52	87	62	76	40	75	45	43	43	86	55	96	65	92	57	92	57	92	55	73	53	53	
4...	73	35	79	54	68	53	86	59	71	41	77	47	47	47	84	56	91	64	84	61	84	61	84	57	71	52	52	
5...	66	33	72	50	63	56	65	60	70	42	63	54	51	51	74	56	75	60	70	53	70	53	70	55	63	52	52	
6...	67	36	64	50	69	55	67	60	67	47	63	52	50	50	68	55	73	61	65	51	65	51	65	52	72	54	54	
7...	66	41	73	49	71	49	70	54	70	46	59	47	50	50	72	50	82	58	82	43	82	43	82	50	73	49	49	
8...	69	45	74	44	71	44	78	52	69	45	69	42	42	42	75	48	87	62	84	53	84	53	84	51	73	46	46	
9...	72	37	81	39	76	43	79	55	72	38	70	41	37	37	81	46	89	59	86	51	86	51	86	51	70	56	56	
10...	72	32	80	42	73	47	77	58	69	36	75	43	38	38	82	47	90	61	87	52	87	52	87	55	69	48	48	
11...	59	31	70	42	74	46	82	45	71	40	74	40	41	41	80	46	89	64	87	61	87	61	87	54	72	48	48	
12...	58	30	56	28	57	45	58	46	70	42	67	32	50	50	62	36	74	50	87	49	87	49	87	50	69	41	41	
13...	54	31	69	32	65	38	69	54	68	41	59	30	58	58	71	35	79	50	79	42	79	42	79	45	63	28	28	
14...	65	26	75	34	71	35	75	46	73	46	67	31	68	68	76	38	85	50	81	41	81	41	81	45	69	30	30	
15...	72	26	80	35	72	40	78	49	69	30	72	34	74	74	75	38	87	52	85	42	85	42	85	50	69	31	31	
16...	74	30	82	35	75	40	79	51	69	30	72	34	76	76	82	39	88	55	86	45	86	45	86	55	70	31	31	
17...	68	28	80	39	71	38	80	52	64	33	72	37	74	74	82	40	86	54	86	45	86	45	86	56	71	39	39	
18...	69	25	66	34	73	40	80	54	67	38	68	44	72	72	85	42	90	64	86	50	86	50	86	57	70	42	42	
19...	62	20	74	25	75	43	80	50	69	32	73	29	73	73	77	35	89	55	88	45	88	45	88	58	75	42	42	
20...	58	29	74	43	73	40	84	50	64	30	74	36	73	73	82	41	89	61	87	50	87	50	87	65	76	46	46	
21...	56	25	64	38	73	39	70	47	69	32	65	36	72	72	72	51	87	69	85	50	85	50	85	62	76	49	49	
22...	45	19	56	20	65	33	63	39	67	34	54	21	70	70	64	29	77	50	70	37	70	37	70	65	72	37	37	
23...	62	15	73	19	69	31	72	41	64	19	65	23	67	67	69	28	82	47	78	32	78	32	78	70	75	33	33	
24...	69	20	82	25	76	34	79	45	58	29	74	27	74	74	74	30	88	49	86	35	86	35	86	80	75	41	41	
25...	73	27	76	38	77	42	80	56	72	28	80	35	80	80	80	38	90	55	87	45	87	45	87	53	77	41	41	
26...	74	28	70	42	74	42	85	56	71	39	78	35	80	80	84	40	90	57	88	49	88	49	88	54	73	50	50	
27...	74	28	74	40	73	37	82	48	72	40	75	38	81	81	83	41	88	59	85	58	85	58	85	45	74	39	39	
28...	70	30	68	36	74	37	81	52	74	42	78	37	81	81	82	40	89	58	90	47	90	47	90	75	78	42	42	
29...	74	31	63	44	75	39	80	52	73	38	47	36	78	78	80	44	86	56	86	57	86	57	86	48	76	47	47	
30...	65	30	63	34	75	41	80	55	70	40	75	34	73	73	79	38	86	61	88	48	88	48	88	52	75	45	45	
31...																												
Mns	66.6	30.4	73.1	38.9	71.9	42.9	77.2	52.0	70.1	38.1	70.8	38.3	72.3	34.3			77.6	43.5	86.2	58.1	83.4	49.0			79.1	54.0	72.8	44.1

Date.	Arizona.																				New Mexico.			
	Bisbee.		Flagstaff.		Fort Apache.		Grand Canyon.		Parker.		Phoenix.		Prescott.		St. Michaels.		San Carlos.		Tucson.		Yuma.		Logan, Nev.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	81	61	72	52	87	56	76	43	99	71	94	74	79	60	79	57	97	65	97	69	96	74	91	70
2...	83	63	75	50	90	57	76	42	103	72	98	74	80	55	79	54	100	67	100	70	100	76	95	67
3...	80	64	76	46	89	54	68	40	103	70	98	73	82	51	78	53	100	67	96	71	98	73	97	67
4...	76	59	71	52	82	57	74	42	100	68	92	71	74	58	69	55	95	67	91	69	95	73	92	66
5...	73	59	62	51	76	56	76	42	94	69	78	71	68	56	67	56	84	68	80	66	84	73	90	65
6...	74	59	68	46	72	59	76	43	97	75	89	68	74	55	70	54	82	66	86	66	93	71	92	65
7...	78	56	70	40	80	50	73	42	102	69	93	72	75	53	70	50	92	64	89	64	95	74	90	60
8...	78	57	71	42	83	51	80	43	108	71	95	71	77	49	72	49	94	63	90	63	101	74	96	62
9...	79	58	73	42	84	49	73	48	110	69	97	73	80	48	75	46	96	61	99	63	105	73	99	59
10...	74	60	71	43	80	55	68	48	106	69	97	76	80	49	75	42	85	67	88	73	102	74	98	58
11...	77	57	69	46	80	52	74	51	101	74	96	74	75	52	72	47	93	62	91	66	100	75	98	67
12...	77	57	62	39	78	57	70	48	91	59	93	69	70	45	65	42	91	64	92	65	95	64	95	61
13...	74	52	62	37	81	38	72	47	93	63	92	61	70	38	60	33	87	55	88	54	95	66	97	53
14...	76	51	65	48	78	45	70	46	99	67	96	63	75	42	66	34	89	50	94	54	101	66	94	53
15...	75	56	68	36	79	46	70	46	104	60	96	70	78	42	60	32	89	62	92	74	104	69	98	63
16...	74	51	67	34	81	43	76	42	104	60	94	74	76	42	70	47	87	54	92	68	102	68	97	63
17...	75	54	69	35	80	44	74	42	106	60	94	68	77	41	73	42	90	52	92	63	102	64	97	54
18...	77	57	71	36	81	44	74	42	103	59	95	64	78	44	73	46	92	53	92	57	101	64	97	60
19...	79	54	71	36	83	45	74	38	101	58	96	62	79	44	75	45	95	51	94	53	99	65	96	60
20...	80	55	72	36	82	42	74	38	103															